What is claimed is:

1. A focus ring assembly configured to substantially encircle a chuck of a plasma processing chamber, comprising:

an annular dielectric body; and

an electrically conductive shield surrounding said annular dielectric body, said electrically conductive shield being configured to be electrically grounded within said plasma processing chamber, said electrically conductive shield including

a tube-shaped portion being disposed outside of said annular dielectric body and surrounding at least part of said annular dielectric body, and

an inwardly-protruding flange portion being in electrical contact with said tube-shaped portion, said flange portion forming a plane that intersects said tube-shaped portion, said flange portion being embedded within said annular dielectric body.

2. The focus ring assembly of claim 1 wherein said plane intersects said tube-shaped portion at an upper edge of said tube-shaped portion, said upper edge of said tube-shaped portion being positioned in between an upper surface of said annular dielectric body and a lower surface of said annular dielectric body.

3. The focus ring assembly of claim 1 wherein said plane forms a 90° angle with a longitudinal axis of said tube-shaped portion.

4. The focus ring assembly of claim 1 wherein said annular dielectric body is formed of a first annular portion and a second annular portion adjacent said first annular portion, at least a portion of said second annular portion being surrounded by said tube-shaped portion of said electrically conductive shield, said first annular portion is formed of a first dielectric material, said second annular portion is formed of a second dielectric material different from said first dielectric material.

5. The focus ring assembly of claim 4 wherein said first dielectric material has a first dielectric constant, said second dielectric constant has a second dielectric constant closer to a dielectric constant of vacuum than said first dielectric constant.

6. The focus ring assembly of claim 5 wherein said first dielectric material is ceramic.

7. The focus ring assembly of claim 5 wherein said second dielectric material is Teflon™.

8. A plasma processing chamber configured to process a substrate, comprising:

a chuck configured to support said substrate during plasma processing; and

a focus ring assembly substantially encircling said chuck, said focus ring assembly including:

an annular dielectric body; and

an electrically conductive shield surrounding said annular dielectric body, said electrically conductive shield being configured to be electrically grounded within said plasma processing chamber, said electrically conductive shield including

a tube-shaped portion being disposed outside of said annular dielectric body and surrounding at least part of said annular dielectric body, and

an inwardly-protruding flange portion being in electrical contact with said tube-shaped portion, said flange portion forming a plane that intersects said tube-shaped portion, said flange portion being embedded within said annular dielectric body.

9. The plasma processing chamber of claim 8 wherein said plane intersects said tube-shaped portion at an upper edge of said tube-shaped portion, said upper edge of said tube-shaped portion being positioned in between an upper surface of said annular dielectric body and a lower surface of said annular dielectric body.

10. The plasma processing chamber of claim 8 wherein said plane forms a 90° angle with a longitudinal axis of said tube-shaped portion.

11. The plasma processing chamber of claim 8 wherein said annular dielectric body is formed of a first annular portion and a second annular portion adjacent said first annular portion, at least a portion of said second annular portion being surrounded by said tube-shaped portion of said electrically conductive shield, said first annular portion is formed of a first dielectric material, said second annular portion is formed of a second dielectric material different from said first dielectric material.

12. The plasma processing chamber of claim 11 wherein said first dielectric material has a first dielectric constant, said second dielectric constant has a second dielectric constant closer to a dielectric constant of vacuum than said first dielectric constant.

13. The plasma processing chamber of claim 12 wherein said first dielectric material is ceramic.

14. The plasma processing chamber of claim 12 wherein said second dielectric material is Teflon™.

15. The plasma processing chamber of claim 8 further comprising a confinement ring disposed above said focus ring assembly.

16. A method for forming a focus ring assembly of a plasma processing chamber, said focus ring assembly being configured to substantially encircle a chuck of said plasma processing chamber, comprising:

providing an annular dielectric body; and

surrounding said annular dielectric body with an electrically conductive shield, including

surrounding at least part of said annular dielectric body with a tube-shaped portion of said electrically conductive shield, said tube-shaped portion being disposed outside of said annular dielectric body, and

embedding an inwardly-protruding flange portion of said electrically conductive shield within said annular dielectric body, said inwardly-protruding flange

portion being in electrical contact with said tube-shaped portion, said flange portion forming a plane that intersects said tube-shaped portion.

17. The method of claim 16 wherein said plane intersects said tube-shaped portion at an upper edge of said tube-shaped portion, said upper edge of said tube-shaped portion being positioned in between an upper surface of said annular dielectric body and a lower surface of said annular dielectric body.

18. The method of claim 16 wherein said plane forms a 90° angle with a longitudinal axis of said tube-shaped portion.

19. The method of claim 16 wherein said annular dielectric body is formed of a first annular portion and a second annular portion adjacent said first annular portion, at least a portion of said second annular portion being surrounded by said tube-shaped portion of said electrically conductive shield, said first annular portion is formed of a first dielectric material, said second annular portion is formed of a second dielectric material different from said first dielectric material.

20. The method of claim 19 wherein said first dielectric material has a first dielectric constant, said second dielectric constant has a second dielectric constant closer to a dielectric constant of vacuum than said first dielectric constant.

21. The method of claim 20 wherein said first dielectric material is ceramic.

22. The method of claim 20 wherein said second dielectric material is Teflon™.